383Z

NETWORK VIDEO RECORDER

SERIES

Quick Start

Please read instructions thoroughly before operation and retain it for future reference.

Online manual download: www.surveillance-download.com/user/h306.swf

IMPORTANT SAFEGUARD

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.

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This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device mat not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

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This product doesn’t have a standby / shutdown mode.

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We are pleased to provide our modifications to the Linux Kernel, as well as a few new commands, and some tools to get you into the code. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

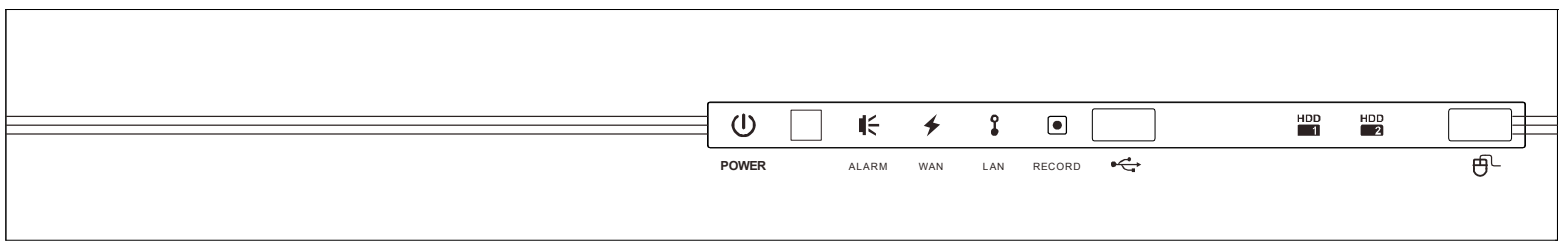
http://download.dvrtw.com.tw/GPL/076D_Series/arm-linux-2.6.tar.gz

TABLE OF CONTENTS

1. HARDWARE OVERVIEW 1
    1.1 Front Panel 1
    1.2 Rear Panel 1
2. CONNECTION 3
    2.1 Camera IP Configurations by LAN (AUTO Mode) 3
    2.2 Advanced Setup 6
3. USER INTERFACE 7
    3.1 Local 7
        3.1.1 NVR Status 7
        3.1.2 Channel Status 7
        3.1.3 Quick Operation 8
        3.1.4 Main Menu 8
        3.1.5 Playback Panel 8
    3.2 Remote 9
4. NETWORK CONFIGURATIONS 11
    4.1 Understand How Your Laptop / Computer Connect to Internet 11
    4.2 Router + Modem 11
    4.3 Modem / Hub + Modem 13
APPENDIX 1 MOBILE SURVEILLANCE VIA EAGLEEYES 15
    A2.1 Prerequisites 15
    A2.2 Where to download 15
APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST 16
APPENDIX 3 COMPATIBLE HARD DISK LIST 17
APPENDIX 4 HARD DISK INSTALLATION 18
APPENDIX 5 BATTERY REPLACEMENT 19

1. HARDWARE OVERVIEW

1.1 Front Panel



1) LED indicators

⏻	The NVR is power-supplied.
	An alarm event occurs.
	The NVR is connected to Internet.
	The NVR is connected to LAN.
RECORD	Recording is on.
HDD	Up to two hard disks are installed in the NVR and connected well.

2) USB port (⇐)

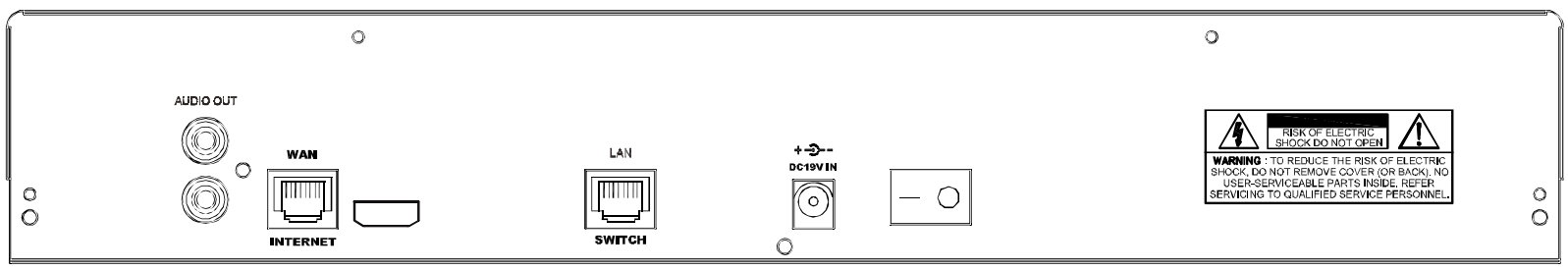
Insert a compatible USB flash drive for video backup.

Note: For the compatible list of USB flash drives, please refer to "APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST" at page 16.

3) Mouse port (🖱)

Insert a mouse for function operation.

1.2 Rear Panel


AUDIO OUT
WAN
INTERNET
LAN
SWITCH
DC19V IN
RISK OF ELECTRIC SHOCK DO NOT OPEN
WARNING : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

1) AUDIO OUT

Connect to a speaker.

2) WAN

This port is used to connect your NVR to Internet via a RJ45 network cable.

3) Video output

This port is used to connect the monitor which supports high definition video output interface.

Note: Direct connection to the monitor which supports VGA or composite interface is not supported. Please prepare a converter in advance.

4) LAN

This port is used to connect your NVR to IP cameras locally.

5) DC19V IN

Connect the NVR to power with the regulated adapter.

6) – O (Power switch)

Switch to "–" to turn on the power, and "O" to turn off the power.

2. CONNECTION

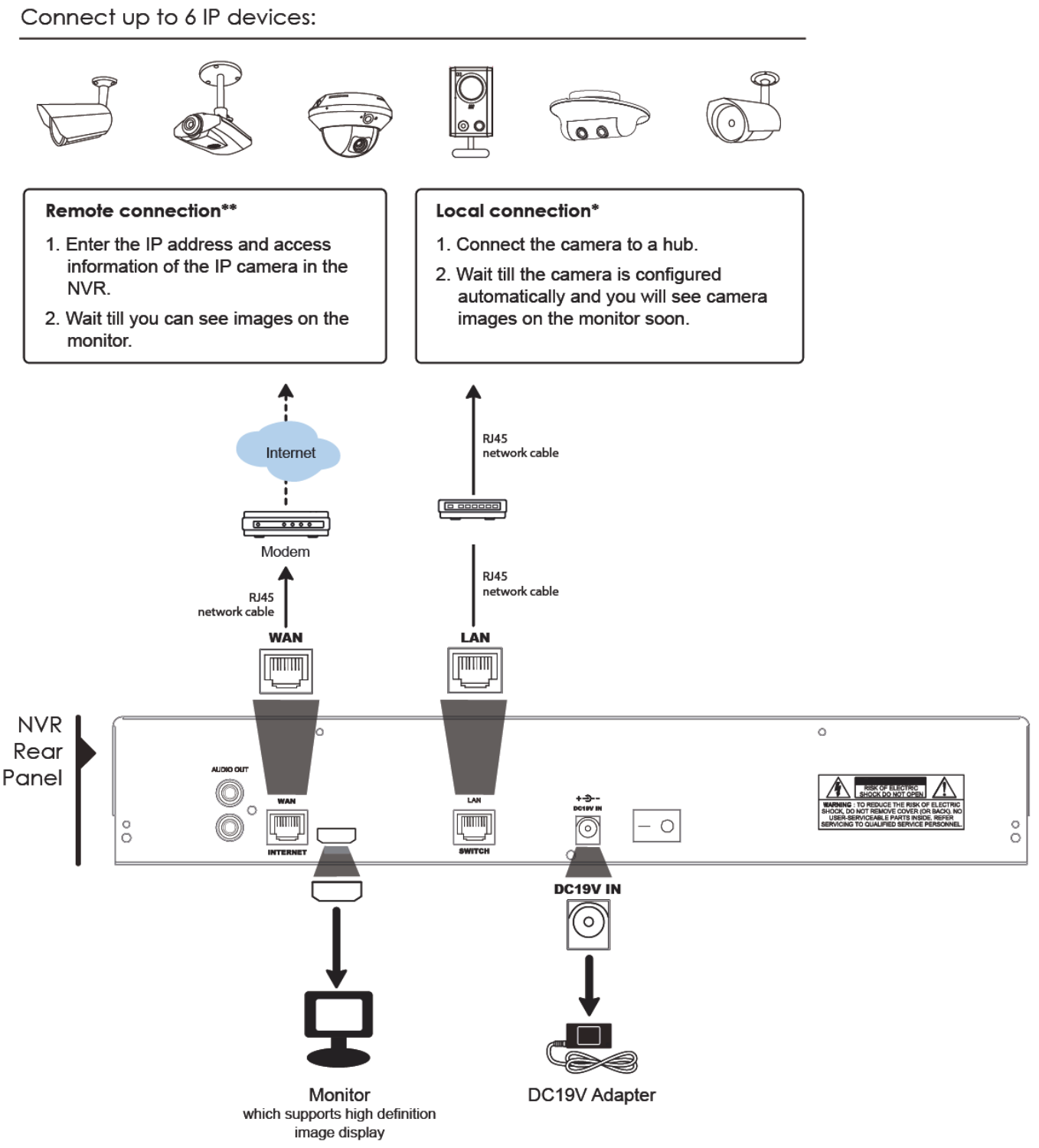
2.1 Camera IP Configurations by LAN

Note: Before connecting the system and powering on the NVR, make sure a hard disk is installed in the NVR for evidentiary recording. To know how to install a hark disk, please refer to "APPENDIX 4 HARD DISK INSTALLATION' at page 18.

2.1.1 AUTO Mode

The connection mode of the LAN port is "AUTO" by default. This mode is suitable when the LAN port of the NVR is connected to a hub.

Note: SETTING Path: (ADVANCED CONFIG) → NETWORK → LAN → MODE.



* Local connection only allows monitoring locally. To monitor from anywhere other than the NVR is installed, please connect your NVR to Internet. For details, please refer to "3. NETWORK CONFIGURATIONS".

** Remote connection is available only when the NVR is connected to Internet. To connect your NVR to Internet, please refer to "3. NETWORK CONFIGURATIONS".

The NVR will ***automatically*** configure the IP address of a camera connected by LAN if:

- The connected IP camera is our brand's IP camera.
- The default IP configuration method of the camera is "DHCP".
- The camera is powered on before the NVR is powered on.

If the NVR **doesn't** configure the IP address of your camera automatically as described above, your IP camera might **NOT** be:

- Our brand's IP camera.
- Set to "DHCP" as its default IP configuration method.

To solve this, use our brand's IP camera, and reconfigure its IP address to 10.1.1.*xx* (*xx* ranges from 11 ~ 253), in the same network segment as the NVR.

a) Select " " on the bottom of the screen, you'll see the list of every connected IP camera with its connection status to this NVR and MAC address.

b) Select the IP address which is not used, and select "SETUP".

IP SEARCH

IP	PORT	MAC	STATUS
10.1.1.12	88	00:0e:53:e5:9a:f1	CONNECTED TO CH1
10.1.1.13	88	00:0e:53:a6:91:18	CONNECTED TO CH2
10.1.2.14	88	00:0e:53:a5:9f:a2	UNUSED
10.1.1.15	88	00:0e:53:e1:4e:k5	CONNECTED TO CH3
10.1.1.16	88	00:0e:53:s5:3e:h6	CONNECTED TO CH4
10.1.1.17	88	00:0e:53:e6:4b:26	CONNECTED TO CH5

	CONNECT	SETUP	EXIT

c) Select "DHCP" in "NETWORK TYPE".

d) Click "APPLY" and "EXIT" to save your changes.

SETUP

NETWORK TYPE	DHCP
IP	10.1.1.14
PORT	88
USER NAME	admin
PASSWORD	*****
NETMASK	255.0.0.0
GATEWAY	10.1.1.10
PRIMARY DNS	168.95.1.1

APPLY	EXIT

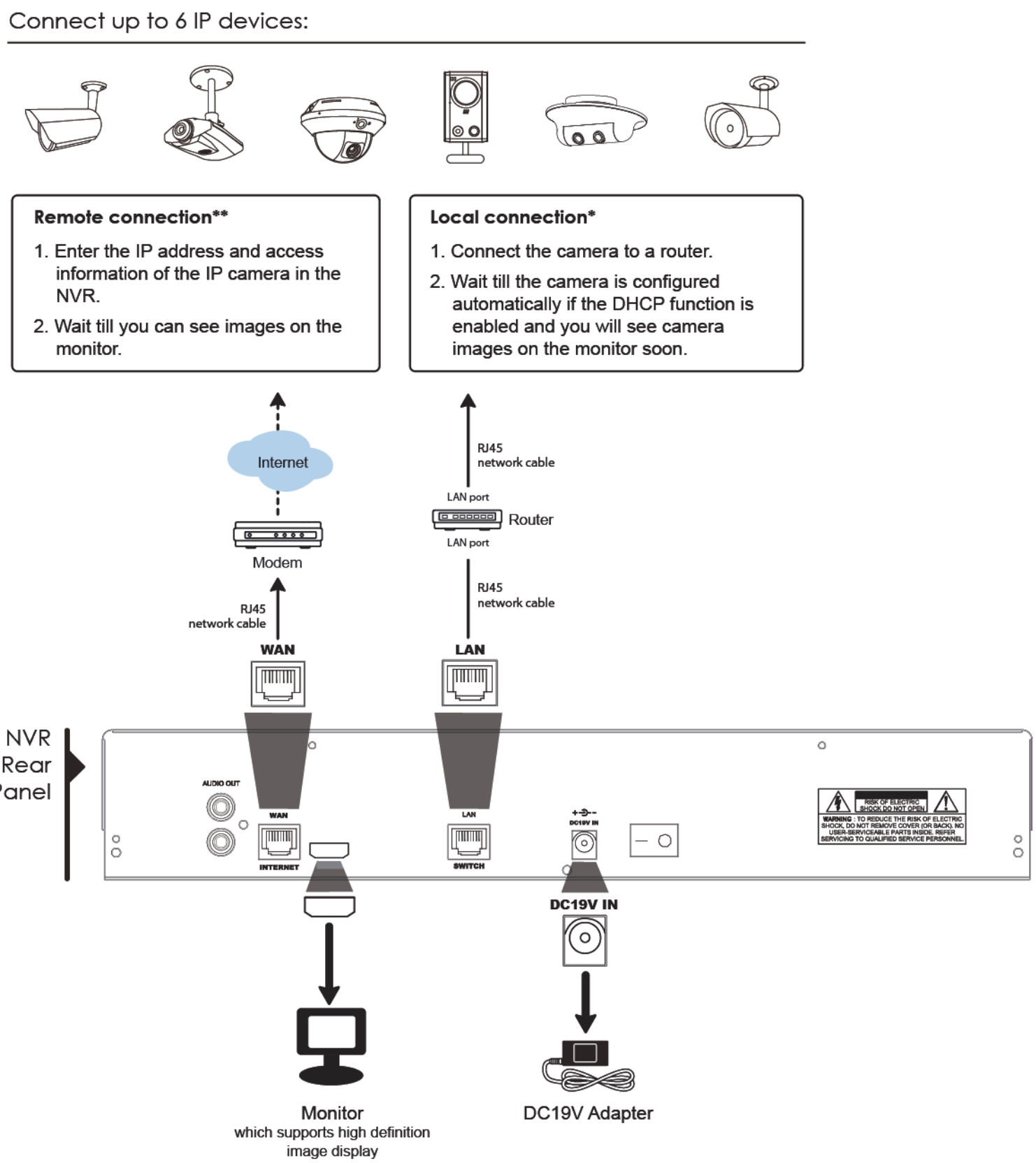
e) The NVR will then detect the IP camera and display images soon.

2.1.2 Static / DHCP Mode

Note: SETTING Path: (ADVANCED CONFIG) → NETWORK → LAN → MODE.

When the LAN port of the NVR is connected to a router (not a hub), you can:

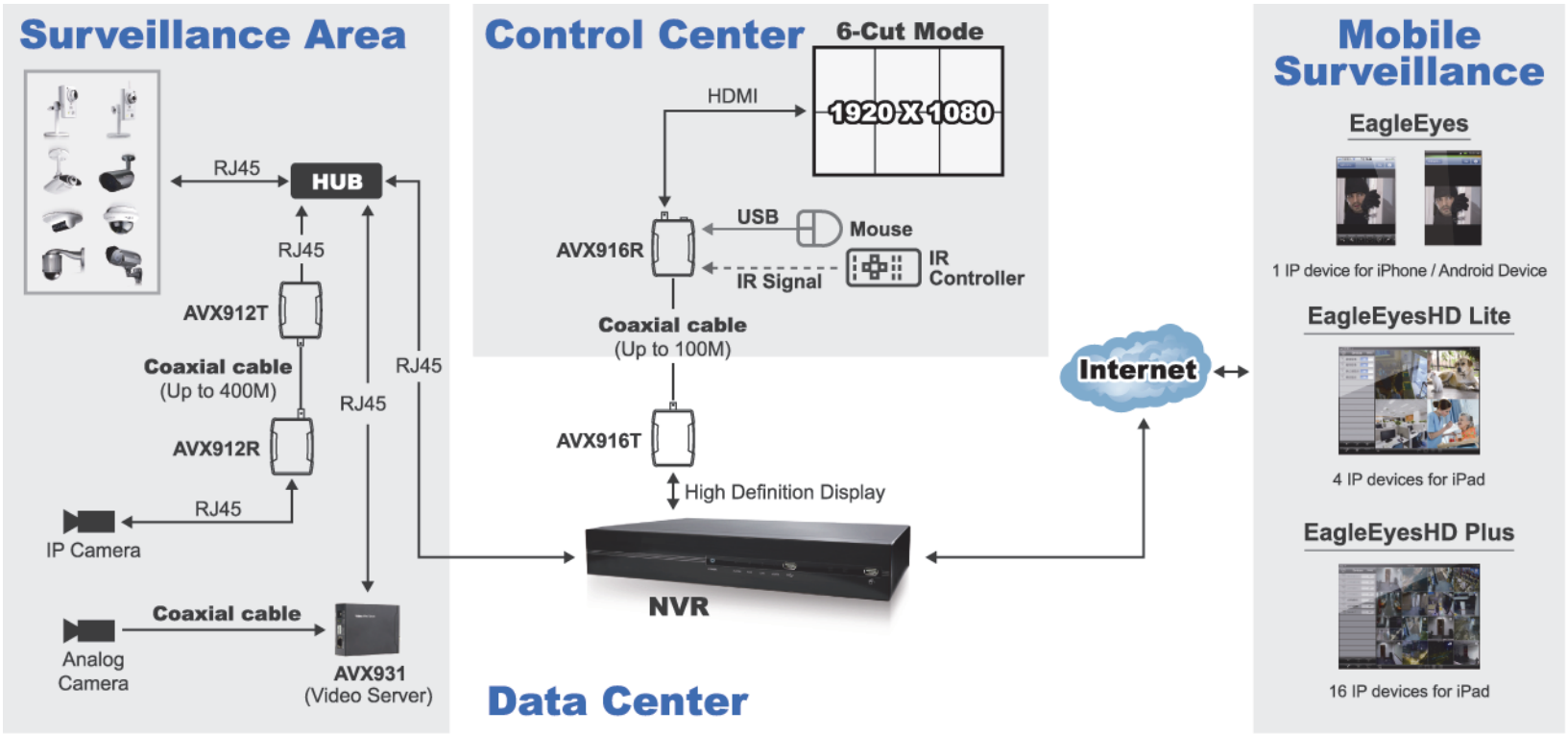
- Choose “Static” when you know the network segment of your router.
  For example, the IP address of your router of *192.168.0.1*, and the network segment of your router will be *192.168.0.xx* (*xx* is ranged from 2 ~ 254).
  You can assign the IP address of the connected IP camera(s) by yourself.
- Choose “DHCP” when your router supports the DHCP function, and you do not know the network segment of your router.
  The IP address of the connected IP camera(s) will be assigned by your router.


Connect up to 6 IP devices:
Remote connection**
1. Enter the IP address and access information of the IP camera in the NVR.
2. Wait till you can see images on the monitor.
Local connection*
1. Connect the camera to a router.
2. Wait till the camera is configured automatically if the DHCP function is enabled and you will see camera images on the monitor soon.
Internet
Modem
RJ45 network cable
WAN
RJ45 network cable
LAN port
Router
LAN port
RJ45 network cable
LAN
NVR Rear Panel
AUDIO OUT
WAN
INTERNET
LAN
SWITCH
DC19V IN
DC19V IN
RISK OF ELECTRIC SHOCK DO NOT OPEN
WARNING : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
Monitor
which supports high definition image display
DC19V Adapter

* Local connection only allows monitoring locally. To monitor from anywhere other than the NVR is installed, please connect your NVR to Internet. For details, please refer to “3. NETWORK CONFIGURATIONS”.

** Remote connection is available only when the NVR is connected to Internet.
To connect your NVR to Internet, please refer to “3. NETWORK CONFIGURATIONS”.

2.2 Advanced Setup



▲ Alarm Recording

When an event alarm of an ETS IP camera is triggered by an external alarm-in device or its built-in human detection sensor, the NVR will start HD event recording.

■ **Real-time Record Mode**
(better than 6CH Full D1 device)

CH1 1.3M @ 30IPS	CH2 1.3M @ 30IPS	CH3 1.3M @ 30IPS
CH4 VGA @ 30IPS	CH5 VGA @ 30IPS	CH6 VGA @ 30IPS

■ **Smart Event Record Mode** (with ETS IP Camera)

Normal Case without Event Trigger
(Record lower resolution or IPS for saving HDD capacity.)

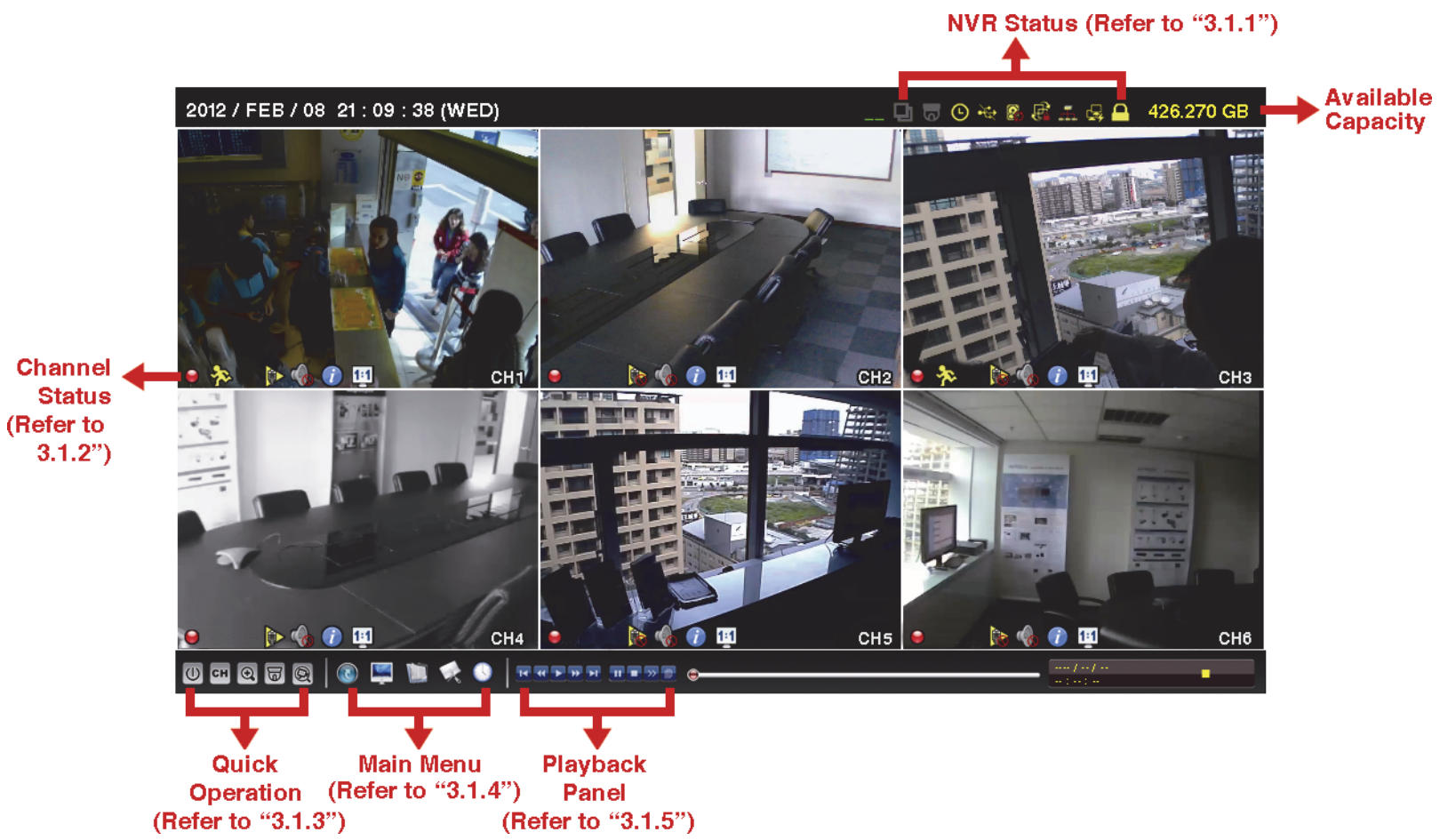
CH1 VGA @ 30IPS	CH2 VGA @ 30IPS	CH3 VGA @ 30IPS
CH4 VGA @ 30IPS	CH5 VGA @ 30IPS	CH6 VGA @ 30IPS

***Event Trigger Case** with CH2 / CH4 / CH6 Event Detected
(CH with ETS IP Camera event trigger will turn to record higher resolution or IPS.)

CH1 VGA @ 30IPS	CH2 1.3M @ 30IPS ⚠	CH3 VGA @ 30IPS
CH4 1.3M @ 30IPS ⚠	CH5 VGA @ 30IPS	CH6 1.3M @ 30IPS ⚠

3. USER INTERFACE

3.1 Local



3.1.1 NVR Status

	Key lock		Key unlock
	Channel lock		Channel unlock
	USB flash drive / device connected		No USB device connected
	Timer record on		Timer record off
	Overwrite on		Overwrite off
	Sequence mode on		Sequence mode off
	PTZ mode on		PTZ mode off
	CPU loading		

Network Status:

	(WAN) Internet connected		(WAN) Internet disconnected
	(WAN) Local connection		
	(LAN) Auto mode –Mbit/s		(LAN) Auto mode – Gbit/s
	(LAN) DHCP / Static IP mode		(LAN) Camera disconnected

3.1.2 Channel Status

	Auto search on		Auto search off	1:1	Original size		Fit to screen
	Live audio on		Audio off		Audio playback on		Audio playback off
	Recording		Human detection event		Alarm event		Motion event
	Live information		Playback information				

3.1.3 Quick Operation

	Click to show the power off panel to either halt or reboot the system.
	Click to show the channel switch panel and select the channel you want.
	Switch to the channel you want first, and click to enter the zoom-in mode. In this mode, click and drag the red frame on the bottom left of the screen to move to the place you want to see.
	Click to enter the PTZ mode and show the PTZ camera control panel.
	Click to open the IP search window and check the current connection status of each channel.

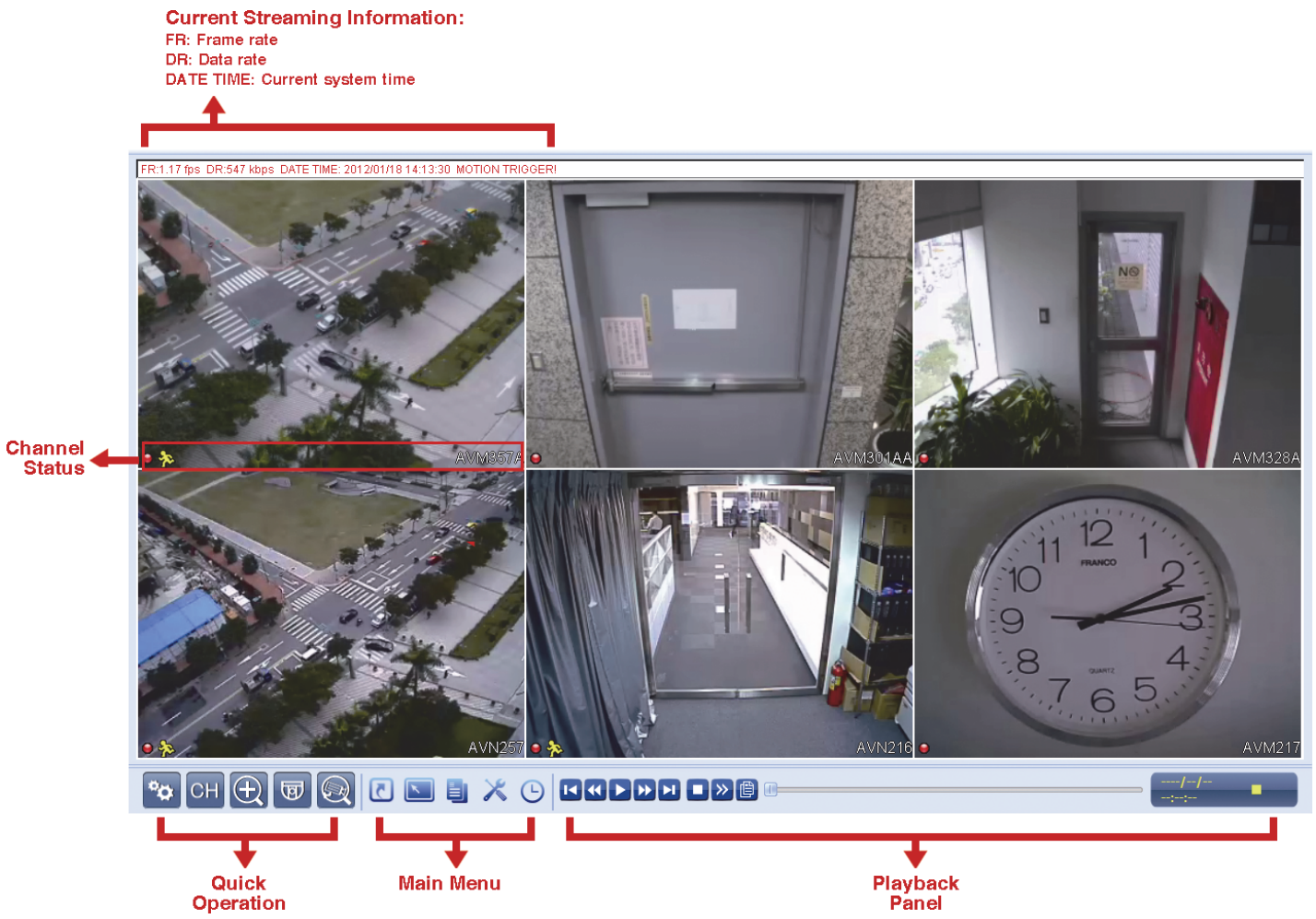
3.1.4 Main Menu

	QUICK START	Click to set the status display, image settings, and date & time.
	SYSTEM	Click to set the system configurations.
	EVENT INFORMATION	Click to enter the event search menu.
	ADVANCED CONFIG	Click to set CONNECTION, CAMERA, DETECTION, ALERT, NETWORK, DISPLAY, RECORD and NOTIFY.
	SCHEDULE SETTING	Click to set record timer and event timer.

3.1.5 Playback Panel

	Fast Forward	Increase the speed for fast forward.
	Fast Rewind	Increase the speed for fast rewind.
/	Play / Pause	Click to play the latest recorded video clip immediately, and click again to pause. In the pause mode, click once to get one frame forward, and click to get one frame rewind.
	Stop	Click to stop the video playback.
	Slow Playback	Click once to get 1/4X speed playback, and click twice to get 1/8X speed playback.
/	Previous / Next Hour	Click to jump to the next / previous time interval in an hour, for example, 11:00 ~ 12:00 or 14:00 ~ 15:00, and start playing the earliest event video clip recorded during this whole hour.
	Quick Search	Click to enter the quick search menu for specific record data search.

3.2 Remote

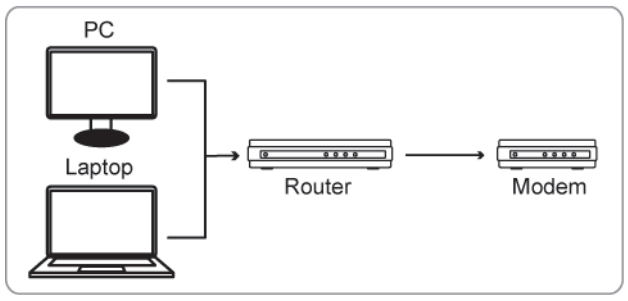

Current Streaming Information:
FR: Frame rate
DR: Data rate
DATE TIME: Current system time
FR:1.17 fps DR:547 kbps DATE TIME: 2012/01/18 14:13:30 MOTION TRIGGER!
Channel Status
AVM357A
AVM301AA
AVM328A
AVN257
AVN216
AVM217
CH
Quick Operation
Main Menu
Playback Panel

4. NETWORK CONFIGURATIONS

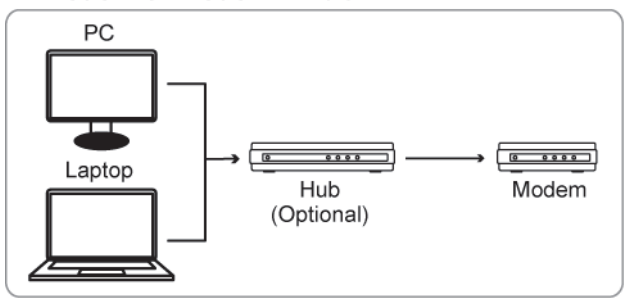
Note: Network configurations may require a person who has advanced network knowledge. It's recommended to check with your installer for this service if possible.

4.1 Understand How Your Laptop / Computer Connect to Internet

1. Router + Modem



2. Modem or Modem + Hub



Devices connected with a RJ45 network cable

Then, connect your NVR directly to your router / hub / modem with a network cable, and power it on.

If you're using:

- Router + modem, please refer to "4.2 Router + Modem".
- Modem or modem + hub, please refer to "4.3 Modem / Hub + Modem".

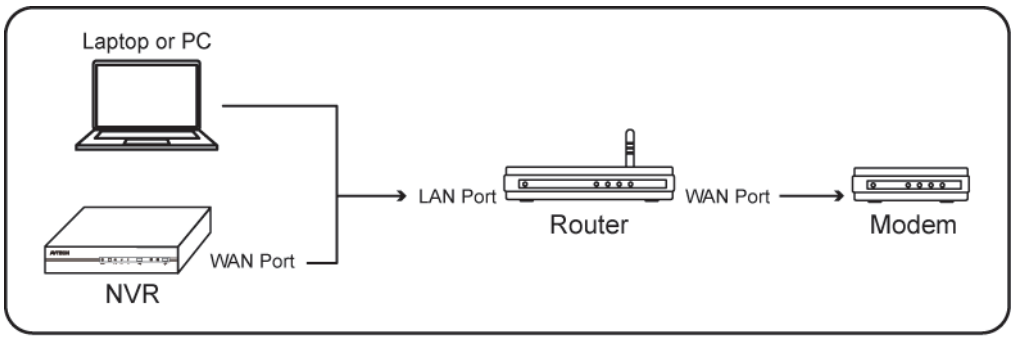
4.2 Router + Modem

Before configuring, make sure:

- Your laptop / PC is connected to the same router as the NVR is intended to connect to.
- You know the IP address, user name and password to access your router.
- The DHCP function of your router is on.

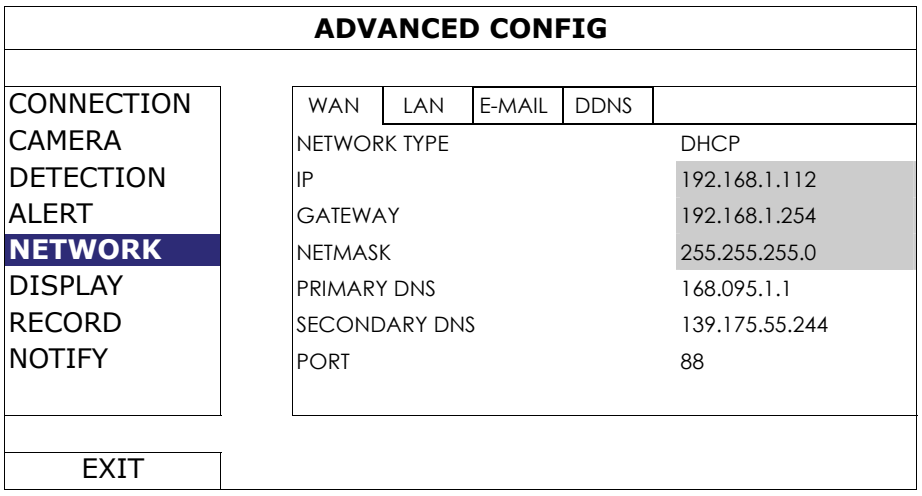
Note: For details, please refer to the user manual of your router.

Step1: Connect your NVR to the router with a RJ45 network cable, similar as follows:



Devices connected with a RJ45 network cable

Step2: From your NVR, select (ADVANCED CONFIG), and select “Network” → “WAN”.



Step3: Select “DHCP”, and configure the DNS setting and port number.

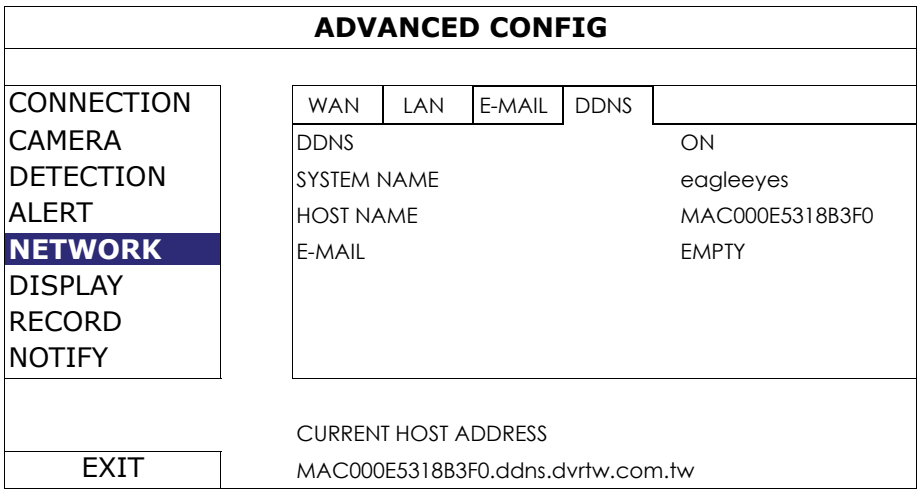
Note: DNS is the domain name server obtained from your ISP (Internet Service Provider).

Note: The default port number is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

Then, note down the IP address shown in “IP”. This is the IP address assigned to your NVR by the router. You’ll need it later for port forwarding.

Step4: Go to “DDNS”, and select “eagleeyes” in “SYSTEM NAME”.

Note down the whole address under “CURRENT HOST ADDRESS”, such as MAC000E5318B3F0@ddns.dvrtw.com.tw. This will be the address used to access your NVR remotely.



Then, select “EXIT” to return to the live view, and continue to Step5 for port forwarding.

Step5: From the web browser of your PC, enter the IP address of your router to access your router.

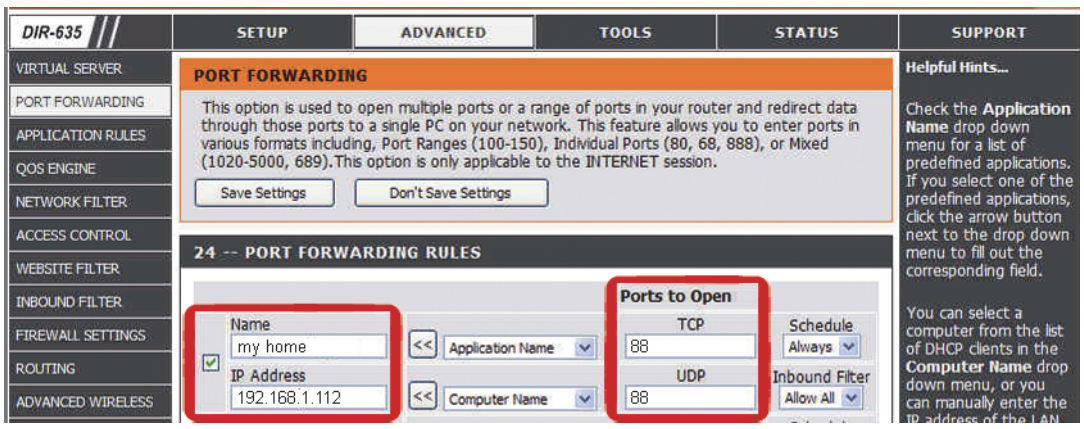
Note: Enter the user name and password if needed.

Step6: In the router setting interface, go to the port forwarding (or virtual server) rule configuration page.

Note: The naming of port forwarding or virtual server may vary based on different router brands. To know where it is, please refer to the user manual of your router.

Then, enter the NVR IP address and the port number you note down in Step3, and enable this rule.

Take D-Link router as an example:
Go to “ADVANCED” → “PORT FORWARDING”.


DIR-635
SETUP
ADVANCED
TOOLS
STATUS
SUPPORT
VIRTUAL SERVER
PORT FORWARDING
APPLICATION RULES
QOS ENGINE
NETWORK FILTER
ACCESS CONTROL
WEBSITE FILTER
INBOUND FILTER
FIREWALL SETTINGS
ROUTING
ADVANCED WIRELESS
PORT FORWARDING
This option is used to open multiple ports or a range of ports in your router and redirect data through those ports to a single PC on your network. This feature allows you to enter ports in various formats including, Port Ranges (100-150), Individual Ports (80, 68, 888), or Mixed (1020-5000, 689).This option is only applicable to the INTERNET session.
Save Settings
Don't Save Settings
24 -- PORT FORWARDING RULES
Name
my home
IP Address
192.168.1.112
Application Name
Computer Name
Ports to Open
TCP
88
UDP
88
Schedule
Always
Inbound Filter
Allow All
Helpful Hints...
Check the Application Name drop down menu for a list of predefined applications. If you select one of the predefined applications, click the arrow button next to the drop down menu to fill out the corresponding field.
You can select a computer from the list of DHCP clients in the Computer Name drop down menu, or you can manually enter the

IP Address:	The IP address of the NVR, such as *192.168.1.112* in our example.
Ports to Open:	The port number you set for the NVR, such as *88* in our example.

Check your connection

Step1: Open your web browser, e.g. Internet Explorer.

Step2: Enter the NVR address and the port number in the URL address box of the web browser, and see if you can access the NVR login page successfully.

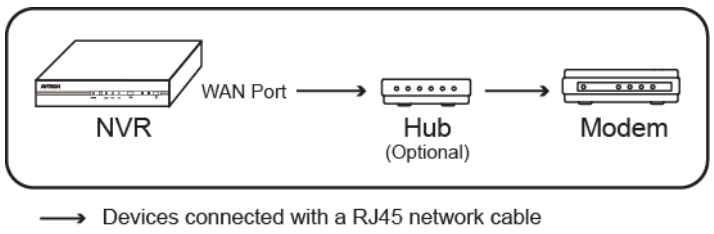
The format is "***http://ipaddress:portnum***" or "***http://hostaddress:portnum***".

4.3 Modem / Hub + Modem

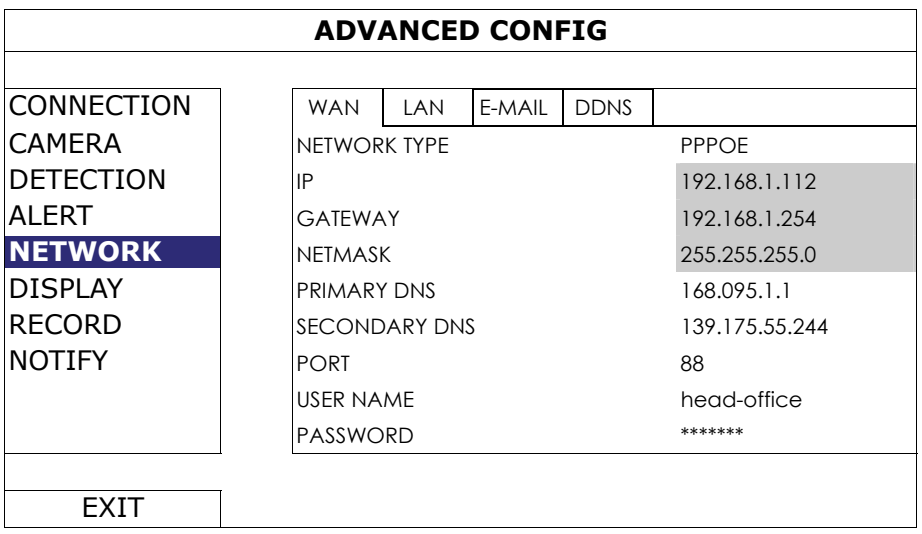
Before configuring, make sure:

- You know you're using static IP address or PPPoE for Internet service.
- For users with static IP address, make sure you get the information of the static IP address, gateway and net mask from your ISP (Internet Service Provider).
- For users with PPPoE, make sure you get the user name and password from your ISP (Internet Service Provider).

Step1: Connect your NVR to the hub or modem with a RJ45 network cable, similar as follows:



Step2: From your NVR, select (ADVANCED CONFIG), and select "Network" → "WAN".



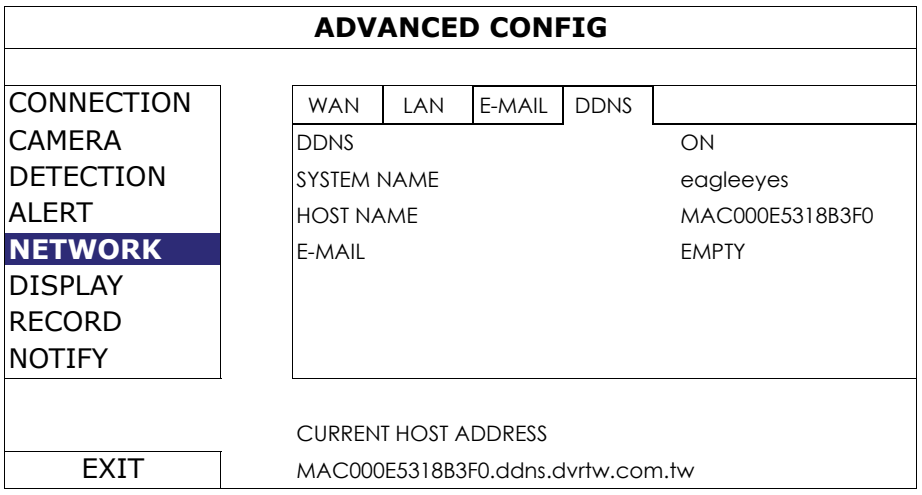
Step3: Select "**STATIC**", "**PPPOE**" or "**DHCP**" based on your network type, and change the port number if needed.

- For "**STATIC**", enter the information of the static IP address, gateway and net mask from your ISP.
- For "**PPPOE**", enter the user name and password from your ISP.
- For "**DHCP**", go to "Step4" directly for port forwarding.

Note: The default port number is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

Step4: (**PPPOE** & **DHCP** Only) Go to “DDNS”, and select “eagleeyes” in “SYSTEM NAME”.

Note down the whole address under “CURRENT HOST ADDRESS”, such as MAC000E5318B3F0@ddns.dvrtw.com.tw. This will be the address used to access your NVR remotely.



Then, select “EXIT” to return to the live view and finish network configurations.

Check your connection

Step1: Open your web browser, e.g. Internet Explorer.

Step2: Enter the IP address (**STATIC**) or host address (**PPPOE** / **DHCP**), and the port number in the URL address box of the web browser, and see if you can access the NVR login page successfully.

The format is “***http://ipaddress:portnum***” or “***http://hostaddress:portnum***”.

APPENDIX 1 MOBILE SURVEILLANCE VIA EAGLEEYES

EagleEyes is a mobile phone program used with our surveillance system for remote surveillance. It has several advantages:

- It's free (Except *EagleEyes Plus* for iPhone, *EagleEyes Plus+* for Android, and *EagleEyesHD Plus* for iPad).
- It's compatible with several popular mobile platforms, such as iPhone, iPad and Android.

It's easy to download, install and configure. For more details about configuring and operating this program, please visit our official website www.eagleeyescctv.com.

A2.1 Prerequisites

Before installing EagleEyes to your mobile phone for remote surveillance, make sure you have checked the following:

- ✓ Your mobile platform is iPhone, iPad & Android.
- ✓ Mobile Internet services are subscribed and available to use for your mobile phone.

Note: You might be charged for Internet access via wireless or 3G networks. For the Internet access rate details, please check with your local network operator or service provider.

- ✓ You have noted down the IP address, port number, user name and password used to access your network camera from Internet.

A2.2 Where to download

Connect to www.eagleeyescctv.com from your mobile phone, and sign in.

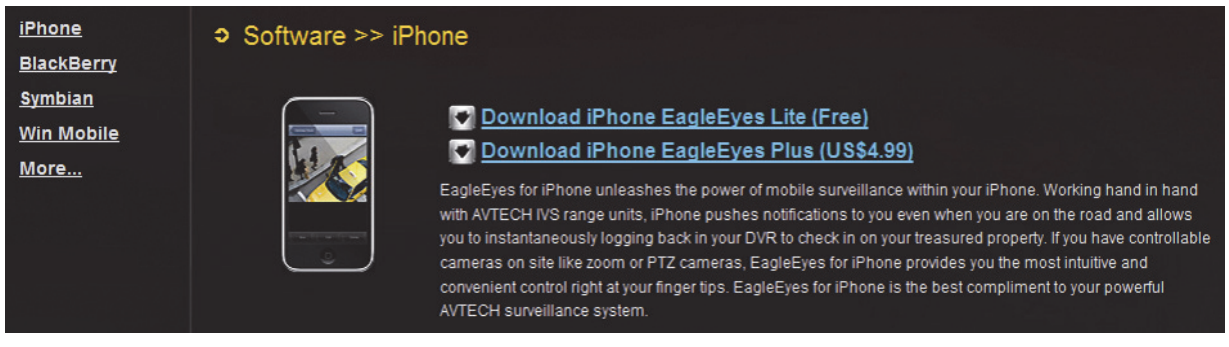
Note: Please **DO NOT** try to download EagleEyes from your computer.

Then, select "Software" and the mobile platform of your phone to download *EagleEyes* to your phone.

- For Android & iPad, select the download link from the website to start downloading.
- For iPhone, two versions of EagleEyes are available:
  -- EagleEyes Plus (US$4.99), and
  -- EagleEyes Lite (Free).

  Select the version you want, and you'll be directed to "App Store" to download the application.

Note: You can also find *EagleEyes* on "App Store" from your iPhone. Go to "App Store", and select "Search". Enter the keyword "eagleeyes" to find and download the version you want.


iPhone
BlackBerry
Symbian
Win Mobile
More...
Software >> iPhone
Download iPhone EagleEyes Lite (Free)
Download iPhone EagleEyes Plus (US$4.99)
EagleEyes for iPhone unleashes the power of mobile surveillance within your iPhone. Working hand in hand with AVTECH IVS range units, iPhone pushes notifications to you even when you are on the road and allows you to instantaneously logging back in your DVR to check in on your treasured property. If you have controllable cameras on site like zoom or PTZ cameras, EagleEyes for iPhone provides you the most intuitive and convenient control right at your finger tips. EagleEyes for iPhone is the best compliment to your powerful AVTECH surveillance system.

When the download is completed, *EagleEyes* will be installed automatically to the location where all applications are saved in your phone by default, or where you specify.

Note: For more details about configuring and operating this program, please visit our official website www.eagleeyescctv.com.

APPENDIX 2 COMPATIBLE USB FLASH DRIVE LIST

Please upgrade the firmware of the NVR to the latest version to ensure the accuracy of the following table. If the USB flash drive is not supported by the NVR, you will see on the screen.

Note: Please use your PC to format the USB flash drive as "FAT32".

Note: You can backup up to 2GB video data for one-time USB backup. To backup more data, please set the time & channel(s) you want, and start USB backup again.

MANUFACTURER	MODEL	CAPACITY
Transcend	JFV35	4GB
	JFV30	8GB
Kingston	DataTraveler	1GB
PQI	U172P	4GB
Apacer	AH320	2GB
	AH320A	8GB
	AH220	1GB
	AH320	4GB
A-data	RB-18	1GB
Sandisk	Cruzer Micro	2GB
	Cruzer Micro	4GB
	Cruzer4-pk	2GB
Netac	U208	1GB
MSI	F200	4GB
SONY	Micro Vault Tiny 2GB	2GB
	Micro Vault Tiny 4GB	4GB
	Micro Vault Tiny	1GB

APPENDIX 3 COMPATIBLE HARD DISK LIST

Please upgrade the firmware of the device to the latest version to ensure the accuracy of the following table.

MANUFACTURER	MODEL	CAPACITY	ROTATION
Seagate	ST3320613AS	320GB	7200 rpm
	ST33500320AS	500GB	7200 rpm
	ST3500410SV	500GB	7200 rpm
	ST3750330AS	750GB	7200 rpm
	ST31000525SV	1000GB	7200 rpm
	ST31000340AS	1000GB	7200 rpm
WD	WD3200AAKS	320GB	7200 rpm
	WD5000AACS	500GB	7200 rpm
	WD6400AAKS	640GB	7200 rpm
	WD7500AAKS	750GB	7200 rpm
	WD10EADS	1TB	7200 rpm
	WD15EADS	1.5TB	7200 rpm
	WD20EADS	2TB	7200 rpm
Maxtor	STM3500320AS	500GB	7200 rpm
	STM3750330AS	750GB	7200 rpm
HITACHI	HDT725032VLA360	320GB	7200 rpm
	HDS721010KLA330	1000GB	7200 rpm

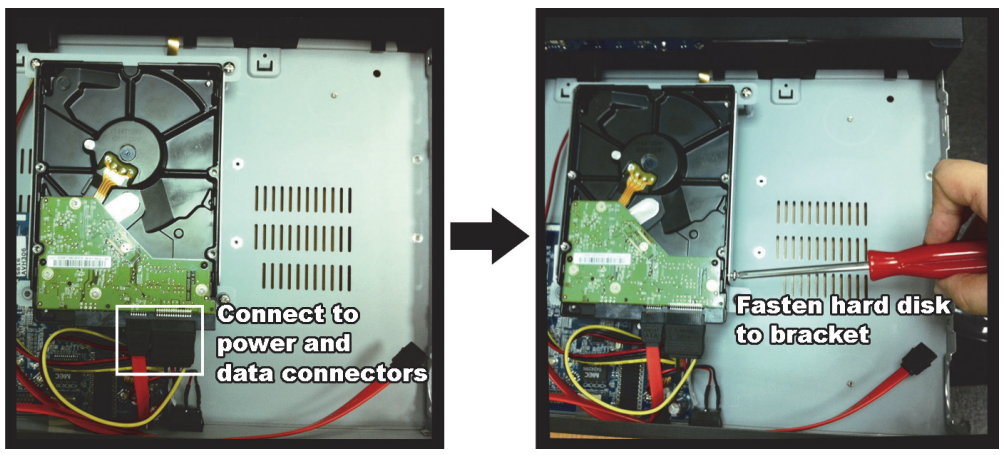
APPENDIX 4 HARD DISK INSTALLATION

Step1: Remove the top cover.

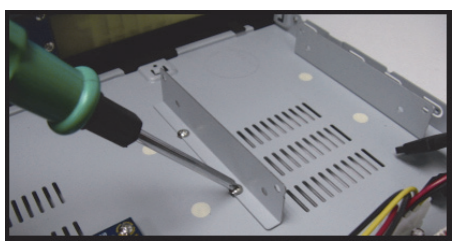
Step2: Find the hark disk bracket in the NVR, and place the compatible hark disk in the bracket.

Step3: With the PCB side facing up, connect the hard disk to the power connector and data connector.

Step4: Fasten the hark disk with the supplied screws, two for each side.



Step5: To install another hard disk, find the supplied hard disk brackets in the package, and fix them onto the NVR base.



Step6: With the PCB side facing up, connect the hard disk to the power connector and data connector.

Step7: Then, put the hard disk in the bracket, and fasten it with the supplied screws, two for each side.

Step8: Replace the top cover and fasten the screws you loosened in Step1.

APPENDIX 5 BATTERY REPLACEMENT

The time reset after power failure, for example, caused by a power outage, will cause the disorder of the recorded data, and users may have problems in searching the event clip they want. To keep the device time from resetting, a non-chargeable lithium battery, *CR2032*, is installed in the device.

However, the device time might still get reset when the battery is low or even running out of power. If so, please replace the device battery, CR2032, **right away** as instructed below.

➢ **How to replace CR2032**

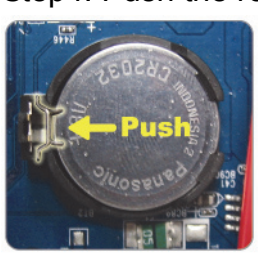
Note: The lithium battery, CR2032, is a non-chargeable battery, and should be purchased separately. Please replace only with the same or equivalent type battery in case of danger.

Step1: Stop all recording **immediately** to prevent the disorder of the recorded data. Then, back up the recorded data if necessary.

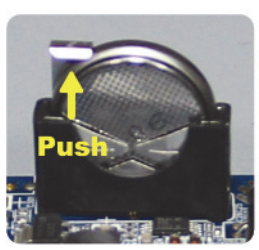
Step2: Power off the device, and disconnect the power.

Step3: Remove the device cover, and find the battery on the mainboard.

Step4: Push the release as indicated below to remove the battery.



Type1



Type 2

Step5: Get a new battery and install it to its slot on the mainboard.

- For Type 1, install it with the side of “CR2032” facing up as shown above.
- For Type 2, install it without the side of “CR2032” facing you as shown above.

Step6: Replace the cover and connect to power.

Step7: Set the date & time, and resume recording.